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INSTANCES OF THE EFFECTS OF MUSICAL SOUNDS
ON ANIMALS.

BY ROBERT E. C. STEARNS.

SOME years ago I observed in a casual way the effect of musical sounds upon certain animals, and was inclined to pursue the inquiry and endeavor to learn by careful experiment through the medium of music how far or in what degree there might exist between man and certain animals that fellow-feeling which makes the whole world kin.

The fraternal relation between dog and man, whether the latter be civilized or savage, is too well known to require remark. So, too, with other animals which man has domesticated, notably the horse and cat.

Some four or five years ago, at a meeting of the Biological Section of the British Association, Sir John Lubbock read some interesting notes on the intelligence of the dog. The man and the dog he said, have lived together in more or less intimate association for many thousands of years, and yet it must be confessed that they know comparatively little of one another. That the dog is a loyal, true, and affectionate friend must be gratefully admitted, but when we come to consider the psychical nature of the animal, the limits of our knowledge are almost immediately reached. I have elsewhere suggested that this arises very much from the fact that hitherto we have tried to teach animals rather than to learn from them—to convey our ideas to them rather than to devise any language or code of signals by which they might communicate theirs to us.

So it occurred to me that we might learn something of the animals around and about us,—add somewhat to the stock of knowledge, and get many interesting hints, some useful and some curious, as to their inner nature,—by the aid of music or musical sounds, by observing the effect of such sounds upon them.

In pursuing an investigation of this kind, we would naturally experiment with the domesticated animals *first*, and of such animals those with which we are the most intimate. Thus the dog and cat are household pets; in many cases housemates from birth to death. Generations of these animals are born within the social atmosphere of the same human family, and quite likely derive or receive through heredity, as well as by individual contact or experience, a feeling or sense of security, protection and fraternity.

While such animals may be regarded perhaps as becoming, though such contact, somewhat humanized, and therefore less adapted or satisfactory for the purposes of such experiments, on the other hand their familiarity with a great number of sounds which their untrained brethren know nothing of would seem to be fully an off-set, and again their familiarity with man would operate adversely to a feeling of fear when experimental sounds were being made.

We do not know that any influence analagous to music inspires the military ants in their great marches, or that the monœcious snails have any occasion for love songs. But these are not next of kin in the scale of Nature, and we have poor relations nearer home who seem to be moved by the same or similar impulses with ourselves.

By voice or sounds fully as much as by facial expression or gesture—movement of body or limb—the emotions are expressed by the human animal, and this is in great measure the case among the animals which follow along after or below man. The moods and tenses of feeling, pleasure and pain, joys and sorrows, are made apparent by the intonation of the voice, by the sounds which such conditions induce, provoke or compel.

We speak of the sense of hearing. An inquiry of the kind herein suggested, relates to the sense of sounds.

The sense of sounds among the higher animals we may assume to be nearly universal, and among dogs and some other animals, combined with memory, tends to the development of the intellectual quality, as the sense of hearing in a certain aspect is an intellectual rather than a physical sense.

To what degree this sense of sounds is developed or exists, can be learned only by experiment, and requires on the part of the experimenter what I unfortunately do not possess,—a knowledge of music, and the ability to play upon one or more instruments.

The sense of sounds, we may assume, varies in animals below man as it does in man, or as the color sense varies; often limited, or nearly or quite wanting; hence the term color-blindness, and we may use the term sound-deafness in an analogous way.

The experiments of Lubbock referred to show a great difference in the perceptions and receptivity of dogs, as between his black poodle "Van" and Mrs. Lubbock's collie "Patience." In speaking of it Sir John says, "I was rather disappointed at this, as if it had succeeded the plan would have opened out many interesting lines of inquiry. Still, in such a case one ought not to wish for one result more than another, as of course the object of all such experiments is merely to elicit the truth, and our result in the present case, though negative, is very interesting."

To the terms music and musical sounds, in this connection, an exceedingly liberal definition must be conceded,—liberal in a simple and non-technical sense, so as to include:

1. Sounds not even musical, but occurring in simple rhythmic order or succession, like the common marching drum-taps, when the full military band is resting.
2. Melodious sounds, or sounds in themselves musical, occurring in harmonious sequence.
3. The same in various strains or keys, more or less complex, but combined and arranged in accordance with harmony.

Of these definitions the first will oftenest serve the purpose.

It would seem that in the selection of tunes or sounds for experimental use, a hint may be had from the animals by observing the special sounds uttered by them in their various moods.

With the birds, for instance, a tune or sounds which include the notes uttered in their amorous moods at or about mating-time.

Many of the sounds which by man are regarded as musical and agreeable may not produce an agreeable impression upon animals, but may have an annoying effect upon them, as the monotonous, attenuated and irritating hum of the mosquito, the filing of a saw, or the riveting of a steam boiler, with its rasping and tumultuous clangor, have upon us.

I spoke of sounds that are regarded as musical by man, but here comes to mind a wide chasm in the way of difference between the musical sense or taste of the European or Caucasian, and the Chinese or Mongolian, idea of music and musical sounds, whether vocal or instrumental.

Some time ago there appeared in a New York paper an account of an interview with an Englishman residing in that city, who, it was stated, had a mania for collecting and taming various small animals, lizards, snakes, spiders, etc.

The question was asked, "How do you manage the taming process?" Answer.—"It was simple enough. First of all I tried kindness. By kindness I mean warmth and music, and as much food as the animals could possibly eat, so as to get them in to a state of torpor. If they were not well advanced in amiability in a week the music was stopped altogether, and I gave but little food. This made them savage. They then had music occasionally, the doses increasing in proportion to the improvement in their temper."

Question.—"What kind of music did you give them?"

Answer.—"It varied a great deal. Some of them liked a piano best. Some liked a violin, and others a flute, and one was never so happy as when listening to an Æolian harp I had erected on the window of the room I kept them in. They all liked a musical box. You might not believe it, but there was not a single one of my snakes or lizards that could not distinguish instruments and tunes. They had very good taste and ear, and would keep time to slow measured music by wagging their heads, and if I ever created discord when playing they would get quite in a rage. I remember a thunderstorm angered them once, and I could hardly keep them from attacking one another, and indulging in a free fight. Luckily an itinerant German band was

within hail, and I prevailed upon its members by financial arguments to play to those beasts for an hour. They were pacified, but the neighbors for two hundred yards around were not."

While conceding a liberal margin for the embellishment of the interviewer and the enthusiasm of the interviewed, there is no doubt that the leaven of the fact prevails in the foregoing. The statement as to the wagging of heads, however, may safely be disregarded.

Without further preamble or speculation, in proceeding with the data which are here brought together, we will begin with the domestic animals, and first with the dogs,—“dogs of high and low degree.”

DOGS AND MUSIC.

Goodrich relates many interesting anecdotes on the apparent effect of music on various animals, among which I find this :

“A dog in Paris, at the commencement of the Revolution, was known to musicians by the name of ‘Parade,’ because he regularly attended the military at the Tuilleries, stood by and marched with the band. At night he went to the Opera, and dined with any musician who intimated, by word or gesture, that his company was asked, yet always withdrew from any attempt to make him the property of any individual.”

Mr. W. S. Jones states that he has “a Skye terrier about four months old who, when the piano is played, seems to be curiously fascinated by the sound, and comes toward it, but then howls in a most plaintive way with his nose in the air, as if protesting against the sound.”

C. J. W. says, “a black-and-tan terrier that we kept for some time was particularly sensitive to music. Although scales played on the piano made her yell piteously, it was by the concertina’s sweet influences that she was most affected, flying before it, and, if unable to leave the room, whining until the tune was stopped. A Spitzbergen dog-friend of ours is much excited by music, but when one tune is played its excitement is more marked;—the

tune is, 'Bonny Dundee.' Dogs are not peculiar in their feeling for music: witness the fact that retired cavalry horses obey the call of the bugle when accidentally heard."

To the Rev. Mr. James of Tuscarora, Nevada, I am indebted for the following and other pertinent instances:

"In Eureka, Nevada, I visited in a family who were the proud possessors of a dog named 'Ben.' Ben was one of those smart dogs who knew everything. He was passionately fond of piano music; it silenced the wagging of his tail, and the studious look of the eyes, as you sat at the instrument, denoted pleasure; but no sooner would the harmonica (mouth organ) be played than he would howl and give short yelps in a ferocious style. The music of the ordinary organ affected him in the same way."

An old friend, Prof. George Davidson, of California, has kindly furnished me with many interesting items, among which the following relate to dogs:

"A small black-and-tan named 'Bessie,' belonging to Mr. A. B. Corson, of North Fifth Street, Philadelphia, will, on hearing 'Shall we meet beyond the River?' sung, throw her head back and set up a most dismal howl, while the tears will run down her cheeks. If the tune is played solemnly on an organ and no word spoken, the same thing will occur; but if any of the words are spoken, with not the slightest musical intonation, she will run to the speaker, and beg and plead in her own way, and do everything but speak, to have it stopped."

"'Toodles,' a Spitz, belonging to the same person, will howl when a discord occurs, or when an accordeon is played, but is not otherwise affected; while 'Rose,' another Spitz, will lie at the foot of the organ, apparently pleased with the music, but making no demonstration of either pleasure or annoyance."

"A black-and-tan, rather larger, named 'Duke,' belonging to Mr. Loney, of North Sixth Street, Philadelphia, will, on hearing 'Hold the Fort' sung, start in with the rest, and will actually sing in dog fashion as long as the singing goes on, and appears to be delighted with the music."

"A Spitz which belonged to Mr. Charles Wetherald (formerly of North Sixth Street, but now of Bryn Mawr), named 'Blanco,'

was so affected by the music of a violin that he would howl, and if the music was persisted in would fly at the musician, and one or the other would have to leave."

DOGS AND CHURCH-BELLS.

"Living next door to us in our English home was the sexton of a church, in the belfry of which was a beautiful peal of eight bells. Each Sunday morning and evening before service the sexton, as leader of the bell ringers, would go to the belfry (the church stood exactly opposite his house) to perform his duties. He had a large Newfoundland dog, which—no sooner did he perceive the sexton going out—would take his stand just outside the door of his master's house, and immediately the bells began to ring would raise his head and howl in the most melancholy and profound manner. No speaking to him would change his position; he would go on until the ringing ceased."

A Salem, Illinois, dog has been reported as similarly affected by the sound of church bells, and, it would seem, by Presbyterian in particular :

"Conrad Bollinger for some years past was the owner of two dogs which were much attached to each other. Several months since one of them died, and the effect thereby produced on the one living was very marked. It for days acted strange, as if lost; and when the bell of the Cumberland Presbyterian Church rang it set up a doleful noise. This it does at each ringing of the bell, during which time it will gaze intently up at the belfry. If the ringing is not protracted it keeps up the whining, howling noise, and when done it returns to the house, which is near to the church. None of the other bells seem to affect this dog."

HOUNDS AND THE BUGLE.

In Mrs. Custer's entertaining volume, "Boots and Saddles," she mentions the effect of the Cavalry Bugle-call as follows: "The pack of hounds were an endless source of delight to the general. We had about forty; the staghounds, that run by sight,

and are, on the whole, the fleetest and most enduring dogs in the world, and the fox-hounds, that follow the trail with their noses close to the ground. The first rarely bark, but the latter are very noisy. The general and I used to listen with amusement to their attempts to strike the key note of the bugler when he sounded the calls summoning the men to guard, mount, stables, or retreat. It rather destroyed the military effect to see beside his soldierly figure a hound sitting down absorbed in imitation. With lifted head and rolling eyes there issued from the broad mouth notes so doleful they would have answered for a *misericordia*.

During a period of ill health I boarded for several months at a hotel in Auburn, California, and a part of nearly every day was passed in the shade of a vine-clad summer house, on the neighboring grounds of an acquaintance, Dr. Todd. A friend of mine, a young man in poor health, boarded with the Doctor, and we were together every day.

Doctor Todd had an old collie that served the purpose of a watch-dog. Our relations with the animal were such that it knew us to be friendly; during the day the dog was always with us. Without the slightest look, word, or sign of command, rebuke or menace by either of us, the moment I commenced to imitate a French horn he would immediately leave and skulk away to his kennel, evidently very much annoyed, and that too without regard to the tune. When a veritable horn was played upon by my companion the poor dog trembled in every limb, went to his kennel, and remained there in a state of nervous agitation, made neither a bark, howl or moan, but wore a deplorably pitiable expression, as if his nerves were absolutely unstrung. No doubt the sounds affected him as the filing of a saw or Chinese instrumental music affect me.

(To be continued.)